

IN1401

RGB Video Scaler

(Uses Inline RS-232 Control Protocol; Available in Black Only)



DESCRIPTION

The Inline **IN1401** is an advanced RGB video scaler from Extron that accepts RGB signals at scan rates from 15 to 60 KHz and resolutions up to 1024 x 768 and uses advanced digital video scaling technology to upconvert the signals to standard resolutions and refresh rates. The IN1401 is an upconverter only — it cannot downscale to lower resolutions. The IN1401 can act as a bridge between the installed base of proprietary process control systems and modern data displays. Because the unit accepts a wide range of standard and non-standard analog video signals, and converts them to standard resolutions and refresh rates, it allows obsolete, long-persistence phosphor monitors to be replaced with standard monitors and flat panel displays. The IN1401 also provides enhanced ergonomics by converting 50 Hz and 60 Hz input signals to higher, flicker-free refresh rates.

The IN1401 offers a wide range of output resolutions to match the optimum or native resolution of virtually any display device. Output refresh rates of 60 Hz to 120 Hz are also selectable. When used with LCD and DLP™ displays, the 60 Hz output setting is recommended. A progressive scan RGBHV output signal is available at standard VGA resolutions, ensuring exceptional image quality with a wide range of CRT, LCD, DLP™, D-ILA®, LCoS, and plasma display devices. The output resolution can also be set for HDTV 720p.

On-screen menus provide easy control for input and output signal adjustments as well as advanced settings. System Info is a menu option that uses the on-screen display to show information about the input and output signals.

The Blue Screen feature provides a full screen blue image for set up and testing purposes. The blue screen output signal (activated via on-screen menu) is always available, even when the input signal is missing or the input settings are incorrectly adjusted. Blue screen is ideal for setting up the output resolution, refresh rate and position settings, and to verify connection to the output display device.

FEATURES

- **Input and output** — Five BNCs are available for RGSB, RGBS, or RGBHV input, while a female 15-pin HD connector is available for RGBHV output.
- **Accepts standard and non-standard** video input signals.
- **Upconverts signals** to desired resolutions and refresh rates (no downscaling).
- **Scaled output rates** — Resolutions from 640 x 480 up to 1365 x 1024 allow the IN1401 to match the optimal or native resolution of virtually any display.
- **Picture controls** — The IN1401 includes a comprehensive selection of video adjustments including brightness, contrast, horizontal and vertical sizing,

horizontal and vertical centering, and individual red, green, and blue gain.

- **RS-232 control** — A rear panel, RS-232 control port provides connection of the IN1401 to a third-party control system.
- **Rack-mountable** — The IN1401 is housed in a 1U, half rack width metal enclosure.
- **Internal international power supply**

MODEL

IN1401

IN1401 with RS-232

PART

60-728-01

60-728-02

OPTIONAL ACCESSORIES

SVHS 6' (1.83 m) S-video cable26-316-02 (page 524)

SPECIFICATIONS

VIDEO INPUT

Number/signal type	1 RGBHV, RGBS, RGSB
Connectors	5 female BNC
Nominal level.....	0.7 Vp-p for RGB
Minimum/maximum levels	Analog: 0V to 1.0 Vp-p with no offset
Impedance	75 ohms
Horizontal frequency	15 kHz to 60 kHz
Vertical frequency	50 Hz to 120 Hz
Resolution range	640 x 480 to 1024 x 768

VIDEO PROCESSING

Digital sampling.....	8 bit, 24 bits per color
Colors	16 million

VIDEO OUTPUT

Number/signal type	1 scaled RGBHV
Connectors	1 female 15-pin HD
Nominal level.....	0.7 Vp-p for RGB
Minimum/maximum levels	0V to 0.7V Vp-p
Impedance	75 ohms
Scaled resolution	640x480 ^{2,4,5,6,7,8} , 800x600 ^{2,4,5,6,7,8} , 852x480 ^{2,4,5,6,7,8} , 1024x768 ^{2,4,5,6,7} , 1152x864 ^{2,4,5,6} , 1280x720 ^{2,4,5,6,7} (HDTV 720p), 1280x768 ^{1,2,3} , 1280x1024 ^{2,4,5} , 1365x768 ^{2,4,5,6} , 1365x1024 ²
	¹ = at 56 Hz, ² = at 60 Hz, ³ = at 65 Hz, ⁴ = at 72 Hz, ⁵ = 75 Hz, ⁶ = 85 Hz, ⁷ = 96 Hz, ⁸ = at 100 Hz, ⁹ = at 120 Hz

SYNC

Input type	RGBHV, RGBS, RGSB
Output type	RGBHV
Input level	0V to 5.0 Vp-p
Output level	0V to 5.0 Vp-p, unterminated
Input impedance	75 ohms
Output impedance	75 ohms
Max input voltage	5.0 Vp-p
Polarity	Positive or negative (switch-selectable)

CONTROL/REMOTE

Serial control port	RS-232, female 3-pole captive screw connector
Program control	ICS100 (Inline Control Software)

GENERAL

Power	100 VAC to 240 VAC, 50/60 Hz, 15 watts, internal, autoswitchable
Rack mount	Yes, with optional rack shelf
Enclosure type	Metal
Enclosure dimensions	1.7" H x 8.5" W x 7.3" D (1U high, half rack width) 4.3 cm H x 7.3 cm W x 18.5 cm D (Depth excludes connectors.)
Product weight	2.0 lbs (0.9 kg)
Shipping weight	4 lbs (2 kg)
Listings/Compliances	ETL (UL1950), CE
Warranty	3 years parts and labor

IN1401 (continued)...

APPLICATION

